

Q 1

Aldol condensation takes place in the presence of \_\_\_\_?

A

$\text{H}_2\text{SO}_4$

B

$\text{K}_2\text{Cr}_2\text{O}_7$

C

$\text{NaOH}$

D

$\text{H}_2\text{O}/\text{H}^+$

Q 2

$\Delta H$  for exothermic reaction is\_\_\_\_\_?

A

More than 1

B

Positive

C

Negative

D

Neutral

Q 3

Specific Rate constant changes its value with

A

Time Constant

B

Change in Temperature

C

Change in Concentration

D

Change in Pressure

Q 4

Limiting reactant controls the amount of \_

A

reactant

B

products

C

both A & B

D

none of these



Q 5

The word Alkali means

A

Base

B

Basic salt

C

Ashes

D

Spirit

WWW.SAEEDMDCAT.COM

Q 6

Which of the following gives primary alcohol with Grignard reagent ?

A

Acetaldehyde

B

Epoxide

C

Acetone

D

Carbon dioxide

Q 7

In Balancing Redox equation the first thing is to

A

balance out all the Reactants

B

Write the skeleton Equation

C

Calculate the oxidation Number

D

Identify the elements

Q 8

During bond formation d orbitals splits into \_\_\_\_\_ of orbitals ?

A

3 sets

B

4 sets

C

5 sets

D

2 sets

Q 9

Alkanes are called as\_\_\_\_\_?

A

Olefines

B

Paraffins

C

Reactive

D

All of these

WWW.SAEEDMDCAT.COM

Q 10

The vapor pressure of water at 8°C is

A

4.579 torr

B

23 torr

C

8.1 torr

D

17.54 torr

Q 11

Enzymes that catalyze hydrolysis:

A

Oxidoreductase

B

Hydrolases

C

Ligases

D

Transferases

Q 12

Which of the following is correct general formula of aliphatic carboxylic acid ?

A

$\text{RCOOH}$

B

$\text{ArCOOH}$

C

$\text{PhCOOH}$

D

None of these



Q 13

Which of the following has one acidic hydrogen in it?

A

Acetylene

B

2-propene

C

2-pentyne

D

1-pentyne

WWW.SAEEDMDCAT.COM

Q 14

Liquids can be converted into solids by decreasing their

A

potential energy

B

kinetic energy

C

both A & B

D

none of these

Q 15

Which one of the following pairs shown the diagonal relationship in the periodic table?

A

Sodium and Lithium

B

Lithium and magnesium

C

Lithium and beryllium

D

Boron and Beryllium

Q 16

Rate of reaction can be studied graphically by plotting time and

A

temperature

B

Concentration

C

Pressure

D

Activation Energy

Q 17

Which of the following group is ortho-para directing group\_\_\_\_\_?

A

-COOH

B

-COR

C

-CN

D

-OH

WWW.SAEEDMDCAT.COM

Q 18

The rate of diffusion or effusion is \_\_\_\_-proportional to square root of its density at constant T and P

A

directly

B

inversely

C

equally

D

highly

Q 19

Propanoic acid is produced when \_\_\_\_\_?

A

Methyl MgBr react with  $\text{CO}_2$

B

Isopropyl MgBr react with  $\text{CO}_2$

C

Ethyl MgBr react with  $\text{CO}_2$

D

Propyl MgBr react with  $\text{CO}_2$

Q 20

Greater the amount of negative charge on an atom, the size of ion will also be

A

smaller

B

greater

C

higher

D

lower



Q 21

Non-stoichiometric compounds of transition elements are called

A

Hydrates

B

Hydrides

C

Interstitial compounds

D

Binary compounds

Q 22

In an Irreversible reaction the tendency of it to go in reverse direction is

A

High

B

low

C

negligible

D

none Of these

WWW.SAEEDMDCAT.COM

Q 23

The maximum number of electron accommodated in a shell or energy level is calculated by formula

A

$$n^2$$

B

$$2n^2$$

C

$$2n$$

D

$$3n$$

Q 24

Hess law is a simple application of

A

Law of Mass Action

B

Law of conservation of energy

C

Law of conservation of mass

D

Dalton's Law of partial pressure

Q 25

Why oxidation of ketones is not easy \_\_\_\_\_?

A

Because they involve breaking of C-O bond

B

Because it involve breaking of C-C bond

C

Because it involve breaking of C-H bond

D

Because it involve breaking of C=C bond

Q 26

Which of the following alcohol undergoes dehydration fastly?

A

Primary alcohol

B

Secondary alcohol

C

Dihydric alcohol

D

Tertiary alcohol

Q 27

Boiling Points of Polar Molecular solids are

A

Low

B

Moderate

C

High

D

Cannot be predicted

Q 28

Aluminum, has 3 electrons in its valence shell, therefore it has the ability to form ion

A

monovalent

B

divalent

C

trivalent

D

tetravalent



Q 29

Which of the following does not show metamerism?

A

Ethers

B

Secondary amines

C

Ketones

D

Aldehydes

Q 30

Which of the following is used as disinfectant?

A

Phenylhydrazone

B

Phenol

C

Acetic acid

D

Vinegar

Q 31

When a sufficient amount of energy is provided to a neutral atom, it ionizes to form

A

ion

B

anion

C

cation

D

Free radical

Q 32

Presence of Process of diffusion in liquids is due to\_\_\_\_\_?

A

Definite volume

B

Strong intermolecular forces

C

Smaller distance

D

Constant motion

Q 33

Metals look shiny as light falls on metal surface collide with mobile electrons and make them \_\_\_\_ these electron gives light when \_\_\_\_\_

A

neutral. Excited

B

excited, de-excited

C

de-excited, excited

D

none of these

Q 34

When NaCl dissolves in water, positive end of water surround the  $\text{Cl}^-$  ion and Negative end of water surrounds the  $\text{Na}^+$  end of salt, which forces are present between these ions and water molecule ?

A

Dipole Dipole forces

B

Ion dipole forces

C

H-bond

D

Debye force

Q 35

Boyle's law is stated as:"The product of pressure and volume of a fixed amount gas at constant temperature is a \_\_\_\_\_ quantity

A

variable

B

constant

C

discreet

D

decreasing

Q 36

The group 1 elements are named as alkali metals because

A

Their oxides are basic

B

Their oxide and hydroxides are water soluble

C

Both a & b

D

They are found in the earth



Q 37

Geometry of the complex compounds usually depends upon

A

type of ligands

B

types of hybridization in the elements of ligands

C

hybridization of central metal

D

All of above

Q 38

Empirical formula of glucose  $C_6H_{12}O_6$  is same with

A

acetaldehyde

B

formaldehyde

C

ethanol

D

acetone

Q 39

Hemoglobin is example of which protein.

A

Transport proteins

B

Structural proteins

C

Genetic proteins

D

Regulatory proteins

Q 40

In cannizzaro's reaction, Benzyl alcohol is obtained from

A

benzaldehyde

B

benzene

C

picric acid

D

benzyl chloride

Q 41

If the time interval is very small for determining the rate of a reaction the values of average and instantaneous rate

A

are both Zero

B

Very close to each other

C

differs by a large number

D

are negative

Q 42

Enzymes are also called as \_\_\_\_\_?

A

Catalyst

B

Lipoproteins

C

Conjugated molecules

D

Biocatalyst

Q 43

Which of the following conditions must be possessed by a compound to have geometrical isomerism?

A

Double bond

B

Different groups attach to same carbon of double bond and a double bond

C

Terminal double bond

D

Same groups attach to carbon atom of double bond

Q 44

Which one of the following enthalpy change is always exothermic in nature?

A

Enthalpy of combustion

B

Enthalpy of solution

C

Enthalpy of formation

D

Enthalpy of atomization



Q 45

How much amount of methane does Natural gas contains?

A

0.8

B

0.85

C

0.7

D

0.98

Q 46

Oxidation Number of all the elements in free state is

A

unity

B

Positive

C

Zero

D

Negative

Q 47

Which of the following is correct relationship between Boiling point and Intermolecular forces ?

A

Boiling point increases if intermolecular forces increases

B

Boiling point decreases if intermolecular forces increases

C

Boiling point increases if intermolecular forces decreases

D

Boiling point is not affected by intermolecular forces

Q 48

The electron affinity and atomic radius are \_\_\_\_\_ to each other

A

directly proportional

B

inversely proportional

C

no effect

D

remains constant

Q 49

Heat is the energy that flows across the

A

Surroundings

B

Boundaries of the system

C

only within the system

D

All of these

Q 50

When O-H bond breaks in alcohol is the order of reactivity

A

Primary alcohol ) secondary alcohol ) tertiary alcohol

B

methyl alcohol ) primary alcohol ) secondary alcohol ) tertiary alcohol

C

Primary alcohol ( secondary alcohol ( tertiary alcohol

D

ethanol ) primary alcohol ) secondary alcohol ) tertiary alcohol

Q 51

Which one is not a state function

A

Internal Energy

B

Enthalpy

C

Work

D

None of these

Q 52

Higher order reactions has half-life

A

same as first order

B

Different from first order reactions

C

Directly proportional to Concentration of reactants

D

None of these



Q 53

Organic compounds are

A

Ionic

B

Non ionic

C

Non covalent

D

Covalent

WWW.SAEEDMDCAT.COM

Q 54

Gypsum is applied to the soil as a source of

A

Ca and P

B

S and P

C

Ca and S

D

We could not apply

Q 55

Shape of benzene molecule is:

A

Hexagonal planar

B

Square planar

C

Trigonal planar

D

linear

Q 56

The enzyme which is used in treatment of cancer in children?

A

Thrombin

B

L- asparaginase

C

Both

D

None of these

Q 57

An enzyme without its cofactor is called \_\_\_\_\_ .

A

Coenzyme

B

Apoenzyme

C

Holoenzyme

D

Proenzyme

Q 59

Which one is not the characteristic of Kingdom Animalia?

A

All animals are ingestive heterotrophs

B

All animals are eukaryotes

C

It is largest kingdom

D

All animals develop from the dissimilar gametes

Q 60

Which of the following is not a component of HIV?

A

RNA

B

protein

C

ribosomes

D

reverse transcriptase

Q 61

The abundant inhibitory neurotransmitter found in the CNS is called?

A

Gamma-glutamyltransferase

B

Gamma-linolenic acid

C

Gamma-Aminobutyric acid

D

none of these



Q 62

If one allele is missing the organism is which of the following?

A

heterozygous

B

homozygous

C

hemizygous

D

none of these

Q 63

Evaporation of water from aerial parts of plants is called:

A

ascent of sap

B

deplasmolysis

C

deplasmolysis

D

none of these

WWW.SAEEDMDCAT.COM

Q 64

Who came up with the term "cell"?

A

Schwann

B

Schleiden

C

Robert Hooke

D

both a and b

WWW.SAEEDMDCAT.COM

Q 65

Outbreeding increases which of the following?

A

homozygosity

B

heterozygosity

C

gene linkage

D

gene pool

Q 66

Coelom is lined by which of the following?

A

Parietal mesoderm

B

Visceral mesoderm

C

Mesoderm

D

both a and b

Q 67

What type of enzyme is myosin?

A

ATP synthase

B

ADP synthase

C

ADP hydrolase

D

ATP hydrolase

Q 68

The first layer of cell wall which is formed is called?

A

primary wall

B

secondary wall

C

middle lamella

D

all of these

Q 69

Lymphatic system consists of all the following except:

A

lymph nodes

B

blood

C

lymphatic vessels

D

lymph

WWW.SAEEDMDCAT.COM



Q 70

The frequency of allele if it is evolutionary successful is?

A

increased

B

decreased

C

no change

D

none of these

Q 71

Influenza caused by which virus?

A

adenovirus

B

Pox virus

C

influenza Virus

D

herpes virus

Q 72

The raw material for coenzymes are?

A

proteins

B

vitamins

C

lipids

D

both a and b

WWW.SAEEDMDCAT.COM

Q 73

Which of the following is an example of superficial reflexes?

A

ankle jerk

B

Knee jerk

C

abdominal reflex

D

Both A and B

Q 74

The structure of an enzyme is altered by which of the following inhibitors?

A

Reversible inhibitor

B

Competitive inhibitor

C

Non-competitive inhibitor

D

Irreversible inhibitor

Q 75

Shell of egg is leathery in appearance in which of the following?

A

Amphibians

B

Birds

C

Prototherians

D

Reptiles

Q 76

In which organism males are haploid?

A

Aphids

B

mosquito

C

butterfly

D

honey bee

WWW.SAEEDMDCAT.COM

Q 77

What is the significance of endospores?

A

They allow fungi to survive in extreme climates

B

They allow gram-negative bacteria to reproduce

C

They allow fungi to store nutrients that can survive extreme conditions

D

They are produced by gram-positive bacteria which can survive extreme conditions



Q 78

\_\_\_\_\_ is usual causative agent of genital herpes

A

HSV-1

B

HSV-2

C

both a and b

D

none of these

WWW.SAEEDMDCAT.COM

Q 80

What was the source of hydrogen for first photosynthetic organisms?

A

water

B

Hydrogen present in soil

C

Hydrogen sulphate

D

Hydrogen sulphide

Q 81

Where is the double stranded DNA of the bacteriophage found?

A

Tail

B

Sheath

C

collar

D

head

Q 82

What type of prokaryotic genetic recombination requires the presence of plasmids?

A

transduction

B

transformation

C

binary fission

D

conjugation

Q 83

Spermatids differentiate into:

A

Spermatozoa

B

secondary spermatocyte

C

primary oocyte

D

mature sperms

Q 84

Deficiency in the production of parathormone causes which of the following disease?

A

brittle bones

B

soft bones

C

rickets

D

tetany

WWW.SAEEDMDCAT.COM

Q 86

The filamentous appendages called pilli are present only on

A

Gram - positive bacteria

B

Gram - negative bacteria

C

Chemo synthetic bacteria

D

None of above

Q 87

A group of interbreeding individuals belonging to a particular species and sharing a common geographic area is called?

A

community

B

family

C

race

D

population



Q 89

Ligases help in which of the following reactions?

A

splitting of two molecules

B

oxidation of molecules

C

joining of molecules

D

both a and b

Q 90

Typically, spiders' blood is blue due to the presence of which of the following?

A

haemoglobin

B

hemerythrin

C

Haemocyanin

D

both b and c

Q 91

The primary spermatocytes undergo meiotic division to form:

A

Spermatozoa

B

secondary spermatocyte

C

primary oocyte

D

mature sperms

Q 92

Ribose is a monosaccharide constituent of many\_\_\_\_

A

enzymes

B

coenzymes

C

vitamins

D

antibiotics

Q 93

Which cell is the longest in the human body?

A

muscle cells

B

nerve cells

C

bone cells

D

gland cells

Q 79

What is formed at the end of the preparatory phase of glycolysis?

A

G3P

B

Dihydroxyacetone phosphate

C

pyruvate

D

both a and b

Q 88

The sperm duct from each side passes into which of the following?

A

ureter

B

urethra

C

testes

D

abdominal cavity

Q 94

According to the fluid mosaic model, the plasma membrane is composed of which of the following?

A

phospholipids

B

extrinsic proteins

C

intrinsic proteins

D

all of these



Q 95

S-band locomotion is characteristically seen in which of the following?

A

Bony fish

B

Fish like mammals

C

Cartilaginous fish

D

all of these

Q 96

What types of plastids aid in pollination?

A

Chromoplast

B

Chloroplast

C

Leucoplast

D

all of these

Q 97

Free living example of platyhelminthes is?

A

dugesia

B

fasciola

C

taenia

D

all of these

WWW.SAEEDMDCAT.COM

Q 98

The spinal cord is continuous with which part of the brain?

A

cerebrum

B

cerebellum

C

medulla oblongata

D

pons

Q 99

Which of the following occurs during muscular contraction?

A

actin slides past myosin

B

ATP supplies energy

C

Calcium ions are involved

D

All of these

Q 100

Rlyceraldehydes are

A

pentose sugars

B

oligo sugars

C

triose sugars

D

monose sugars

WWW.SAEEDMDCAT.COM

Q 101

Why are phospholipids a major part of the lipid bilayer in plasma membranes?

A

They have a nitrogenous base in the head region.

B

They have fatty acids in the tail region.

C

They are amphipathic in nature.

D

They have a phosphate group in the head region.

Q 102

A surfactant is a secretory product that is composed of:

A

Protein and disaccharide

B

Protein and lipid

C

Lipid and carbohydrate

D

Carbohydrate and vitamins



Q 103

Which of the following is the respiratory surface in human beings?

A

Lungs

B

alveoli

C

Windpipe

D

alveolar duct

Q 104

The fibrous connective tissue which attaches bone to bone is called:

A Tendon

B Ligament

C reticular tissue

D Cartilage

Q 105

Which of the following condition is hybrid?

A

AA

B

Aa

C

aa

D

all of these

Q 106

The viral DNA or RNA is protected by

A

shell of lipids

B

shell of proteins

C

shell of carbohydrates

D

shell of amino acids

Q 107

Which type of the receptors are present in the ear?

A

Chemoreceptors

B

Photoreceptors

C

Thermoreceptors

D

Mechanoreceptors

Q 108

Assume that blood type is not a sex-linked trait. A mother with genotype "A/O" and a father with genotype "A/B" could NOT have a child with which blood type?

A

A

B

B

C

AB

D

O

Q 109

Which of the following statements correctly describes how the host cell membrane is changed by viral replication?

A

Pores develop.

B

glycocalyx layer is formed.

C

membrane is resynthesized

D

Viral proteins are acquired.

Q 110

Uterus opens into the vagina through:

A

uterus

B

cervix

C

oviduct (fallopian tube)

D

ovary



Q 111

What are the end products of the ETC in animals?

A

ATP

B

carbon dioxide

C

water

D

both a and c

WWW.SAEEDMDCAT.COM

Q 112

Which of the following is FALSE about concerning enzymes?

A

Substrates must bind the enzyme's active site in order to initiate its effects

B

Enzymes increase both the forward rate and reverse rate of a reaction

C

Enzymes are not destroyed in a reaction and can be used in the same reaction countless times

D

Enzymes increase the amount of product created in a reaction

Q 113

What is the approximate diameter of the peroxisome?

A

0.5 micrometer

B

1.5 micrometer

C

2 micrometer

D

1 micrometer

WWW.SAEEDMDCAT.COM

Q 114

Which of the following is an ovoviviparous animal?

A

basking shark

B

humans

C

blue shark

D

all of these

Q 115

The auditory relay center is found in:

A

Corpus callosum

B

Hindbrain

C

Forebrain

D

Midbrain

Q 116

Which of the following is non-cellular in most cases in animals?

A

Sclerenchyma

B

Chlorenchyma

C

Mesoderm

D

Mesenchyme

Q 117

Carbonic anhydrase is found in:

A

RBC

B

Parabronchi

C

Pleura

D

none of these

WWW.SAEEDMDCAT.COM

Q 118

Louis Pasteur discovered a vaccine against which disease?

A

anthrax

B

smallpox

C

rabies

D

HIV



Q 119

According to the induced fit model, what happens when an enzyme-substrate complex is formed?

A

The contact between the substrate and the enzyme causes a change in the shape of the active site.

B

The shape of the substrate and the shape of the active site are complementary to each other.

C

The substrate fits into the active site and forms bonds with the amino acids at the active site.

D

All of the above.

Q 120

For every 3 molecules of carbon dioxide in Calvin cycle how much G3P is produced?

A

6

B

2

C

4

D

8

Q 121

The carbon dioxide transported in the form of carbonate ions is:

A

30%

B

50%

C

70%

D

95%

WWW.SAEEDMDCAT.COM

Q 122

Which of the following bone forms hip joint with hip bone?

A

tibia

B

fibula

C

tarsals

D

femur

WWW.SAEEDMDCAT.COM

Q 123

Chitinous Setae are the locomotory organs of annelids which are present on?

A

cell wall

B

prostomium

C

nucleolus

D

parapodia

Q 124

Which of the following is NOT an example of evidence supporting the endosymbiotic theory?

A

Mitochondria and other plastids multiply by binary fission.

B

Mitochondria contain their own DNA, which is a single circular chromosome.

C

Mitochondria have their own ribosomes, which are 70s.

D

none of these

Q 125

A horse is pulling a cart of mass 50 kg in the horizontal direction, if the distance travelled is 20 m then what will be the work done by the horse

A 1000 J

B -1000 J

C 12/31

D 500 J

Q 126

A current of 5A flows in a resistor of 2 ohms. Calculate the energy dissipated in 300 seconds in the resistor.

A

5KJ

B

10KJ

C

15KJ

D

20 KJ



Q 127

Magnetic Field lines move from \_\_\_\_\_

A

north to south

B

south to north

C

east to west

D

west to east

Q 128

The sum of all forms of molecular energies (kinetic and potential) of a substance is termed as its:

A absolute temperature

B internal energy

C potential energy

D kinetic energy

Q 129

The maximum value of displacement from the mean position is called:

A

height

B

amplitude

C

frequency

D

distance

Q 130

SI Unit of current is ?

A

Ampere

B

Volt

C

Joules

D

Watt

WWW.SAEEDMDCAT.COM

Q 131

SI unit of acceleration is:...

A

m

B

$\text{m}^2$

C

$\text{m/s}$

D

$\text{m/s}^2$

Q 132

White rays can produce x-rays?

A

TRUE

B

FALSE

C

May depend on some conditions

D

none of these

Q 133

What will be the product after alpha decay of U-238?

A

Th-234

B

Po-234

C

Rn-234

D

none of these

Q 134

A body is travelling in a circle of radius  $r$  at a constant angular velocity  $\omega$ . Its centripetal acceleration will be:

A

$$a = r\omega$$

B

$$a = r/\omega$$

C

$$a = \omega r^2$$

D

$$a = r\omega^2$$



Q 135

The speed  $v$  of the waves in the string depends upon the tension  $F$  of the string and  $m$ , the mass per unit length of the string. It is given by

A

$$v^2 = F/m$$

B

$$v = F/m$$

C

$$v \cdot m = F$$

D

$$v = F \cdot m$$

Q 136

Transformer operates on

A

A.C

B

D.C

C

both

D

none of these

WWW.SAEEDMDCAT.COM

Q 137

The value of coulomb constant is:...

A

$$9 \times 10^9 \text{ Nm}^2$$

B

$$9 \times 10^9 \text{ Nm}^2 / \text{C}^2$$

C

$$9 \times 10^{-9} \text{ Nm}^2 / \text{C}^2$$

D

$$9 \times 10^{-9} \text{ Nm}^2$$

Q 138

Alternating Current Generators use

A

coiled rings

B

split rings

C

slip rings

D

solenoid rings

WWW.SAEEDMDCAT.COM

Q 139

Which of the following process is reversible ?

A

Transfer of heat by radiation

B

Electrical heating by nichrome wire

C

Transfer of heat by conduction

D

Isothermal compression

Q 140

A constant force  $F = 2i + 3j + 4k$  is applied on a body what will be the work done to move a body 5 m in z- direction

A

0

B

10 J

C

45 J

D

20 J

Q 141

x-rays can be deflect by

A

electric field

B

magnetic field

C

both a & B

D

none of these

Q 142

An object moving in a circle is tied to a string. What happens when the string is cut?

A it continues moving in a circle

B it flies off along a tangent

C it falls straight down

D none of these



Q 143

Average dc Voltage across the load in terms of  $V_{max}$  is

A

$0.532 V_{max}$

B

$0.637 V_{max}$

C

$0.759 V_{max}$

D

$0.437 V_{max}$

Q 144

The value of triple point of water is:....

A

1 K

B

100 K

C

273.16 K

D

0 K

WWW.SAEEDMDCAT.COM

Q 145

Revolution/minute is the unit for

A

Angular displacement

B

Angular momentum

C

Angular acceleration

D

Torque

Q 146

When one electron strike with one proton both will

A attract

B repel

C no effect

D annihilate

Q 147

According to Faraday's Law, emf induced in circuit depends on

A

max. magnetic flux

B

rate of change of magnetic flux

C

change in magnetic flux

D

initial flux

Q 148

The force between two charges  $Q$  and  $q$ , separated by a distance  $d$  is  $F$ . What will be the force between  $4Q$  and  $q/2$ ?

A

$2F$

B

$4F$

C

$F$

D

$F \text{ --- } 2$

Q 151

Coulomb's law is true for

A

Atomic distance

B

Nuclear distance

C

Charge as well as uncharged particle

D

All the distances

Q 152

A body of mass 2 kg is raised vertically raised by 2m then work will be

A 38.2 J

B 392.1 J

C 39.2 J

D 40 J



Q 153

The maximum efficiency of full wave rectifier is

A

80.60%

B

40.60%

C

70%

D

50%

Q 154

What is the atomic number and mass number of Helium?

A

$A=4, Z=2$

B

$A=2, Z=4$

C

$A=1, Z=1$

D

$A=3, Z=1$

Q 155

Half wave rectifier passes only

A

lower half cycle

B

upper half cycle

C

both cycles

D

none of them

Q 156

A field in which work done in a moving a body along the close path is zero called

A

Electric field

B

conservative field

C

magnetic field

D

none of these

Q 157

The circuit which gives continuously varying potential is called

A

Complex network

B

Wheatstone bridge

C

Potential divider

D

All of above

Q 158

Which rays are used to scan bones

A

white rays

B

beta rays

C

gamma rays

D

none of these

Q 159

The coupling coefficient of perfectly coupled coil is

A

zero

B

1

C

more than 1

D

infinite

Q 160

The overvoltage surges in power systems me be caused by

A

Lightning

B

Resonance

C

Switching

D

All of the above



Q 161

Nuclear force is :

A

spin independent

B

both charge and spin independent

C

spin dependent but charge independent

D

charge dependent

Q 162

When a light ray travels from the medium of low refractive index to a medium of high refractive index. Its....

A

speed decreases, frequency decreases, wavelength unchanged

B

speed decreases, frequency unchanged, wavelength unchanged

C

speed unchanged, frequency increases, wavelength decreases

D

speed decreases, frequency unchanged, wavelength decreases

Q 163

When white light is used in Double Slit experiment then

A

non interference fringes observed

B

only central bright fringe is observed

C

only red and white fringes are observed

D

central bright and few coloured fringes are observed

Q 164

We can calculate velocity of an object from displacement-time graph by:....

A

calculating area under the graph

B

finding gradient of displacement-time graph

C

calculating area above the graph

D

finding the length of the graph

Q 165

An electrical instrument which is used to measure current passing through a circuit is called?

A

Ammeter

B

Voltmeter

C

Galvanometer

D

Avometer

WWW.SAEEDMDCAT.COM

Q 166

Instantaneous velocity is defined at

A

particular displacement

B

instant acceleration

C

instant time

D

average time

Q 168

Displacement of an object in moving around a complete circle is

A

$2\pi r$

B

$2r$

C

$\pi r$

D

zero

Q 169

A particle having the charge of 20 electrons on its falls through a potential difference of 100 volts. Calculate the energy acquired by it in electron volt (eV).

A

$2.0 \times 10^{-2} \text{ eV}$

B

$2.0 \times 10^{-3} \text{ eV}$

C

$2.0 \times 10^2 \text{ eV}$

D

$2.0 \times 10^3 \text{ eV}$



Q 170

In a periodic wave, the distance between second and fifth crests is 15 cm, what is the wavelength of the wave?

A

45 cm

B

5 cm

C

$\frac{1}{5}$  cm

D

$\frac{1}{3}$  cm

Q 171

In which case, the object is speeding up:....

A

velocity is positive acceleration is negative

B

velocity is negative acceleration is negative

C

velocity is negative acceleration is zero

D

velocity is negative acceleration is positive

Q 173

Power transformers are designed to have maximum efficiency at

A

Full load

B

50%

C

80%

D

No load

Q 174

If a charged particle is at rest but we are seeing it from a train then we observe

A

electric field

B

magnetic field

C

both fields

D

none of these

Q 175

A variable force  $F = 2x$  is applied what will be the work done in moving the particle from  $X = 10$  to  $0$

A

100 J

B

50 J

C

-50 J

D

-100 J

Q 176

The energy input to an engine is 60 J, and the work it performs is 15 J. What is its thermal efficiency?

A

4.00

B

1.00

C

0.25

D

impossible to determine

Q 149

You have three capacitors, each of  $2\ \mu\text{C}$ . In which of the following combinations of the three capacitors, the resultant capacitance is  $3\ \mu\text{C}$ ?

A

all three capacitors in series

B

two capacitors are in series, one in parallel

C

two capacitors are in parallel, one in series

D

all three capacitors in parallel

Q 150

Lifetime of an excited state is

A

$10^{-6}$ s

B

$10^{-7}$ s

C

$10^{-8}$ s

D

$10^{-3}$ s



Q 167

Adiabatic process can be defined as:...

A

$$PV^\gamma = \text{constant}$$

B

$$PV^\gamma = RT$$

C

$$P / V^\gamma = \text{constant}$$

D

$$PV^\gamma = nRT$$

Q 174

If a charged particle is at rest but we are seeing it from a train then we observe

A

electric field

B

magnetic field

C

both fields

D

none of these

Q 175

A variable force  $F = 2x$  is applied what will be the work done in moving the particle from  $X = 10$  to  $0$

A

100 J

B

50 J

C

-50 J

D

-100 J

Q 176

The energy input to an engine is 60 J, and the work it performs is 15 J. What is its thermal efficiency?

A

4.00

B

1.00

C

0.25

D

impossible to determine

Q 177

The deuterium atom has \_\_\_\_\_ quarks

A

3

B

6

C

9

D

12

WWW.SAEEDMDCAT.COM

Q 178

100 W heater is used to melt 50 g of ice at 0°C. How long should the heater be switched on? Specific latent heat of fusion of ice is 334 J/g.

A

28 min

B

16.7 min

C

2.8 min

D

167 min

Q 179

The bound state electron have

A

wave nature

B

particle nature

C

dual nature

D

it never moves when in bound state

Q 180

To get a peak load voltage of 40V out of a bridge rectifier, what should be the approximate rms value of secondary voltage?

A

0V

B

14.4V

C

28.3V

D

56.6 V



Q 181

Choose the correct sentence.

A

Who isn't here yet asked Parveen.

B

"Who isn't here yet?" asked Parveen.

C

Who isnt here yet? asked Parveen.

D

"Who isnt here yet?" asked Parveen.

Q 182

I bought \_\_\_\_\_ new TV set yesterday.

A

a

B

an

C

the

D

no article

Q 183

He \_\_\_\_\_ out five minutes ago.

A

goes

B

has gone

C

had gone

D

went

Q 184

You must had (A)/ a kind and gentle heart (B) if you want (C) / to become a successful doctor (D)

A

You must had

B

a kind and gentle heart

C

if you want

D

to become a successful doctor.

Q 185

Please open the door.

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

Q 186

No news \_\_\_\_\_ good news.

A

is

B

are

C

was

D

were

Q 187

Choose the correct sentence.

A

You're going to lose your slice of cake if you do not eat it quickly!

B

Your'e going to lose your slice of cake if you do not eat it quickly.

C

You're going to lose your slice of cake if you do not eat it quickly.

D

Youre going to lose your slice of cake if you do not eat it quickly.

Q 188

Would you mind \_\_\_\_\_ (open) the window please, it's hot here.

A

open

B

opens

C

opened

D

opening



Q 189

Choose the correct sentence.

A

After we'd closed the door we sat down to read the newspaper.

B

After we'd closed the door, we sat down to read the newspaper.

C

After w'ed closed the door, we sat down to read the newspaper.

D

After we'd closed the door, we sat down to read the Newspaper.

Q 190

Everyone hopes to get a job with prospects ---- promotion, but not many people manage to do so.

A

on

B

of

C

in

D

around

Q 191

I can see that you \_\_\_\_\_ a lot of fun.

A

having

B

have

C

are having

D

is having

Q 192

Bring me that file.

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

Q 193

I would love (A)/ to be able to swim (B)/ if I am not afraid (C)/ of water (D)

A

I would love

B

to be able to swim

C

if I am not afraid

D

of water.

Q 194

Saad likes to play \_\_\_\_\_ hockey.

A

a

B

an

C

the

D

no article

WWW.SAEEDMDCAT.COM

Q 195

According to a survey (A)/ only those forests which were (B)/ not under village management (C)/ succumbed from fires recently.(D)

A

According to a survey

B

only those forests which were

C

not under village management

D

succumbed from fires recently.

Q 196

Saira speaks so fast that it's \_\_\_\_\_ to understand her sometimes.

A

easy

B

difficult

C

slow

D

wrong



Q 197

Choose the correct spelling of the word

A

comitte

B

commite

C

committee

D

comittee

Q 198

laud

A

criticise

B

lament

C

praise

D

oppose

Q 199

Find the error?

A

No, it's not true.

B

The curtain closed, and the people will applaud.

C

My sister is a medical practitioner.

D

No mistakes.

Q 200

We \_\_\_\_\_ (visit) the lake many times before, but we enjoyed ourselves the most this time.

A

visit

B

have visited

C

visited

D

had visited

Q 201

Statement There has been an unprecedented increase in the number of successful candidates in this year's School Leaving Certificate Examination. I. The government should make arrangements to increase number of seats of intermediate courses in existing colleges. II. The government should take active steps to open new colleges to accommodate all these successful candidates.

A

both of them follows

B

None of them follows

C

Only I follows

D

Only II follows

Q 202

Statement: The government has imported large quantities of sugar as per trade agreement with other countries. The prices of sugar in the domestic market have fallen sharply in the recent months.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause

Q 203

Statements No rings are bangles. All gold rings. Conclusions (I) No bangles are gold. (II) Some rings are gold.

A

Only conclusion (I) follows

B

Only conclusion (II) follows

C

Both conclusions follow

D

Both of them do not follow



Q 204

Complete the series AB, EF, \_\_\_\_\_, MN

A

IJ

B

RS

C

WX

D

MN



Q 205

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A

Both of them follows

B

None of them follows

C

Only I follows

D

Only II follows

Q 206

A book cannot exist without

A

Education

B

Pictures

C

Pages

D

Qualification

WWW.SAEEDMDCAT.COM

Q 207

Look at this series: 36, 34, 30, 28, 24, ... What number should come next?

A

20

B

22

C

23

D

26

Q 208

Which of the following sets are null sets ?

A

$\{\}$

B

$\emptyset$

C

Both (a) and (b)

D

Both A and B

Q 209

I. The biker protested against the increase in fuel prices. II. The dialogue between the government representatives and the leaders of the biker's association were not successful.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect.

C

Both statements I and II are independent causes

D

None of these

Q 210

Statements The government has decided to roll back the hike in the prices of cooking gas and kerosene. Some ministers had resigned in protest against the hike in prices of cooking gas and other petroleum products.

A

I is cause and II is effect

B

II is cause and I is effect

C

Both are independent causes

D

both are effects of independent causes

Q1

$\Delta H$  for exothermic reaction is \_\_\_\_\_?

A

More than 1

B

Positive

C

Negative

D

Neutral

Q2

Specific Rate constant changes its value with

A

Time Constant

B

Change in Temperature

C

Change in Concentration

D

Change in Pressure



Q3

Limiting reactant controls the amount of \_

A

reactant

B

products

C

both A & B

D

none of these

Q4

The word Alkali means

A

Base

B

Basic salt

C

Ashes

D

Spirit

Q5

Which of the following gives primary alcohol with Grignard reagent ?

A

Acetaldehyde

B

Epoxide

C

Acetone

D

Carbon dioxide

Q6

In Balancing Redox equation the first thing is to

A

balance out all the Reactants

B

Write the skeleton Equation

C

Calculate the oxidation Number

D

Identify the elements

Q6

In Balancing Redox equation the first thing is to

A

balance out all the Reactants

B

Write the skeleton Equation

C

Calculate the oxidation Number

D

Identify the elements

Q7

When O-H bond breaks in alcohol is the order of reactivity

A

Primary alcohol ) secondary alcohol ) tertiary alcohol

B

methyl alcohol ) primary alcohol ) secondary alcohol ) tertiary alcohol

C

Primary alcohol ( secondary alcohol ( tertiary alcohol

D

ethanol ) primary alcohol ) secondary alcohol ) tertiary alcohol

Q8

During bond formation d orbitals splits into \_\_\_\_\_ of orbitals ?

A

3 sets

B

4 sets

C

5 sets

D

2 sets

Q9

Alkanes are called as\_\_\_\_\_?

A

Olefines

B

Paraffins

C

Reactive

D

All of these



Q10

The vapor pressure of water at  $8^{\circ}\text{C}$  is

A

4.579 torr

B

23 torr

C

8.1 torr

D

17.54 torr

Q11

Enzymes that catalyze hydrolysis:

A

Oxidoreductase

B

Hydrolases

C

Ligases

D

Transferases

Q12

Which of the following has one acidic hydrogen in it?

A

Acetylene

B

2-propene

C

2-pentyne

D

1-pentyne

Q13

Liquids can be converted into solids by decreasing their

A

potential energy

B

kinetic energy

C

both A & B

D

none of these

Q14 Which one of the following pairs shown the diagonal relationship in the periodic table?

A Sodium and Lithium

B Lithium and magnesium

C Lithium and beryllium

D Boron and Beryllium

Q15

Rate of reaction can be studied graphically by plotting time and

A

temperature

B

Concentration

C

Pressure

D

Activation Energy

Q17

The rate of diffusion or effusion is \_\_\_\_-proportional to square root of its density at constant T and P

A

directly

B

inversely

C

equally

D

highly

Q18

Propanoic acid is produced when \_\_\_\_\_?

A

Methyl MgBr react with  $\text{CO}_2$

B

Isopropyl MgBr react with  $\text{CO}_2$

C

Ethyl MgBr react with  $\text{CO}_2$

D

Propyl MgBr react with  $\text{CO}_2$



Q19

Greater the amount of negative charge on an atom, the size of ion will also be

A

smaller

B

greater

C

higher

D

lower

Q20

In an Irreversible reaction the tendency of it to go in reverse direction is

A

High

B

low

C

negligible

D

none Of these

Q21

The maximum number of electron accommodated in a shell or energy level is calculated by formula

A

$n^2$

B

$2n^2$

C

$2n$

D

$3n$

Q22

Hess law is a simple application of

A

Law of Mass Action

B

Law of conservation of energy

C

Law of conservation of mass

D

Dalton's Law of partial pressure

Q24

Which of the following alcohol undergoes dehydration fastly?

A

Primary alcohol

B

Secondary alcohol

C

Dihydric alcohol

D

Tertiary alcohol

WWW.SAEEDMDCAT.COM

Q25

Boiling Points of Polar Molecular solids are

A

Low

B

Moderate

C

High

D

Cannot be predicted

Q26

Aluminum, has 3 electrons in its valence shell, therefore it has the ability to form ion

A

monovalent

B

divalent

C

trivalent

D

tetravalent

Q27

Which of the following is used as disinfectant?

A

Phenylhydrazine

B

Phenol

C

Acetic acid

D

Vinegar



Q28

When a sufficient amount of energy is provided to a neutral atom, it ionizes to form

A

ion

B

anion

C

cation

D

Free radical

Q29

Presence of Process of diffusion in liquids is due to\_\_\_\_\_?

A

Definite volume

B

Strong intermolecular forces

C

Smaller distance

D

Constant motion

Q30

Metals look shiny as light falls on metal surface collide with mobile electrons and make them \_\_\_\_ these electron gives light when \_\_\_\_\_

A

neutral. Excited

B

excited, de-excited

C

de-excited, excited

D

none of these

Q31

When NaCl dissolves in water, positive end of water surround the  $\text{Cl}^-$  ion and Negative end of water surrounds the  $\text{Na}^+$  end of salt, which forces are present between these ions and water molecule ?

A

Dipole Dipole forces

B

Ion dipole forces

C

H-bond

D

Debye force

Q32

Boyle's law is stated as: "The product of pressure and volume of a fixed amount gas at constant temperature is a \_\_\_\_\_ quantity"

A

variable

B

constant

C

discreet

D

decreasing

Q33

The group 1 elements are named as alkali metals because

A

Their oxides are basic

B

Their oxide and hydroxides are water soluble

C

Both a & b

D

They are found in the earth

Q34

Empirical formula of glucose  $C_6H_{12}O_6$  is same with

A

acetaldehyde

B

formaldehyde

C

ethanol

D

acetone

Q35

Hemoglobin is example of which protein.

A

Transport proteins

B

Structural proteins

C

Genetic proteins

D

Regulatory proteins



Q36

In cannizzaro's reaction, Benzyl alcohol is obtained from

A

benzaldehyde

B

benzene

C

picric acid

D

benzyl chloride

Q37

If the time interval is very small for determining the rate of a reaction the values of average and instantaneous rate

A

are both Zero

B

Very close to each other

C

differs by a large number

D

are negative

Q38

Enzymes are also called as \_\_\_\_\_?

A

Catalyst

B

Lipoproteins

C

Conjugated molecules

D

Biocatalyst

Q39

Which of the following conditions must be possessed by a compound to have geometrical isomerism?

A

Double bond

B

Different groups attach to same carbon of double bond and a double bond

C

Terminal double bond

D

Same groups attach to carbon atom of double bond

Q40

Which one of the following enthalpy change is always exothermic in nature?

A

Enthalpy of combustion

B

Enthalpy of solution

C

Enthalpy of formation

D

Enthalpy of atomization

Q41

How much amount of methane does Natural gas contains?

A

0.8

B

0.85

C

0.7

D

0.98

Q42

Which of the following is correct relationship between Boiling point and Intermolecular forces ?

A

Boiling point increases if intermolecular forces increases

B

Boiling point decreases if intermolecular forces increases

C

Boiling point increases if intermolecular forces decreases

D

Boiling point is not affected by intermolecular forces

Q43

The electron affinity and atomic radius are \_\_\_\_\_ to each other

A

directly proportional

B

inversely proportional

C

no effect

D

remains constant



Q44

Heat is the energy that flows across the

A

Surroundings

B

Boundaries of the system

C

only within the system

D

All of these

Q45

Which one is not a state function

A

Internal Energy

B

Enthalpy

C

Work

D

None of these

Q46

Higher order reactions has half-life

A

same as first order

B

Different from first order reactions

C

Directly proportional to Concentration of reactants

D

None of these

Q47

Organic compounds are

A

Ionic

B

Non ionic

C

Non covalent

D

Covalent

WWW.SAEEDMDCAT.COM

Q48

Shape of benzene molecule is:

A

Hexagonal planar

B

Square planar

C

Trigonal planar

D

linear

Q49

The enzyme which is used in treatment of cancer in children?

A

Thrombin

B

L- asparaginase

C

Both

D

None of these

Q50

An enzyme without its cofactor is called \_\_\_\_\_.

A

Coenzyme

B

Apoenzyme

C

Holoenzyme

D

Proenzyme

Q51

The number of spermatids produced from primary spermatocytes is?

A

1

B

2

C

3

D

4

WWW.SAEEDMDCAT.COM



Q52

Which one is not the characteristic of Kingdom Animalia?

A

All animals are ingestive heterotrophs

B

All animals are eukaryotes

C

It is largest kingdom

D

All animals develop from the dissimilar gametes

Q53

Which of the following is not a component of HIV?

A

RNA

B

protein

C

ribosomes

D

reverse transcriptase

Q54

The abundant inhibitory neurotransmitter found in the CNS is called?

A

Gamma-glutamyltransferase

B

Gamma-linolenic acid

C

Gamma-Aminobutyric acid

D

none of these

Q55

If one allele is missing the organism is which of the following?

A

heterozygous

B

homozygous

C

hemizygous

D

none of these

WWW.SAEEDMDCAT.COM

Q56

Who came up with the term "cell"?

A

Schwann

B

Schleiden

C

Robert Hooke

D

both a and b

WWW.SAEEDMDCAT.COM

Q57

Outbreeding increases which of the following?

A

homozygosity

B

heterozygosity

C

gene linkage

D

gene pool

Q58

Coelom is lined by which of the following?

A

Parietal mesoderm

B

Visceral mesoderm

C

Mesoderm

D

both a and b

Q59

What type of enzyme is myosin?

A

ATP synthase

B

ADP synthase

C

ADP hydrolase

D

ATP hydrolase



Q60

The first layer of cell wall which is formed is called?

A

primary wall

B

secondary wall

C

middle lamella

D

all of these

Q62

The frequency of allele if it is evolutionary successful is?

A

increased

B

decreased

C

no change

D

none of these

Q63

The raw material for coenzymes are?

A

proteins

B

vitamins

C

lipids

D

both a and b

Q64

Which of the following is an example of superficial reflexes?

A

ankle jerk

B

Knee jerk

C

abdominal reflex

D

Both A and B

Q65

The structure of an enzyme is altered by which of the following inhibitors?

A

Reversible inhibitor

B

Competitive inhibitor

C

Non-competitive inhibitor

D

Irreversible inhibitor

Q66

In which organism males are haploid?

A

Aphids

B

mosquito

C

butterfly

D

honey bee

WWW.SAEEDMDCAT.COM

Q67

What is the significance of endospores?

A

They allow fungi to survive in extreme climates

B

They allow gram-negative bacteria to reproduce

C

They allow fungi to store nutrients that can survive extreme conditions

D

They are produced by gram-positive bacteria which can survive extreme conditions

Q68

\_\_\_\_\_ is usual causative agent of genital herpes

A

HSV-1

B

HSV-2

C

both a and b

D

none of these



Q69

What is formed at the end of the preparatory phase of glycolysis?

A

G3P

B

Dihydroxyacetone phosphate

C

pyruvate

D

both a and b

Q70

What was the source of hydrogen for first photosynthetic organisms?

A

water

B

Hydrogen present in soil

C

Hydrogen sulphate

D

Hydrogen sulphide

Q71

Where is the double stranded DNA of the bacteriophage found?

A

Tail

B

Sheath

C

collar

D

head

Q72

Spermatids differentiate into:

A

Spermatozoa

B

secondary spermatocyte

C

primary oocyte

D

mature sperms

Q73 Deficiency in the production of parathormone causes which of the following disease?

A brittle bones

B soft bones

C rickets

D tetany

Q73 Deficiency in the production of parathormone causes which of the following disease?

A brittle bones

B soft bones

C rickets

D tetany

Q74

Pre Chordates is another name used for which of the following?

A

Echinoderms

B

Vertebrates

C

Chordates

D

Hemichordates

WWW.SAEEDMDCAT.COM

Q75

The filamentous appendages called pilli are present only on

A

Gram - positive bacteria

B

Gram - negative bacteria

C

Chemo synthetic bacteria

D

None of above



Q76

A group of interbreeding individuals belonging to a particular species and sharing a common geographic area is called?

A

community

B

family

C

race

D

population

Q77

The sperm duct from each side passes into which of the following?

A

ureter

B

urethra

C

testes

D

abdominal cavity

Q78

Ligases help in which of the following reactions?

A

splitting of two molecules

B

oxidation of molecules

C

joining of molecules

D

both a and b

Q79

The primary spermatocytes undergo meiotic division to form:

A

Spermatozoa

B

secondary spermatocyte

C

primary oocyte

D

mature sperms

Q80

Ribose is a monosaccharide constituent of many\_\_\_\_

A

enzymes

B

coenzymes

C

vitamins

D

antibiotics

Q81

Which cell is the longest in the human body?

A

muscle cells

B

nerve cells

C

bone cells

D

gland cells

Q82

According to the fluid mosaic model, the plasma membrane is composed of which of the following?

A

phospholipids

B

extrinsic proteins

C

intrinsic proteins

D

all of these

Q83

S-band locomotion is characteristically seen in which of the following?

A

Bony fish

B

Fish like mammals

C

Cartilaginous fish

D

all of these



Q84

What types of plastids aid in pollination?

A

Chromoplast

B

Chloroplast

C

Leucoplast

D

all of these

Q85

Free living example of platyhelminthes is?

A

dugesia

B

fasciola

C

taenia

D

all of these

Q86

Which of the following occurs during muscular contraction?

A

actin slides past myosin

B

ATP supplies energy

C

Calcium ions are involved

D

All of these

Q87

Rlyceraldehydes are

A

pentose sugars

B

oligo sugars

C

triose sugars

D

monose sugars

WWW.SAEEDMDCAT.COM

Q88

Why are phospholipids a major part of the lipid bilayer in plasma membranes?

A

They have a nitrogenous base in the head region.

B

They have fatty acids in the tail region.

C

They are amphipathic in nature.

D

They have a phosphate group in the head region.

Q89

A surfactant is a secretory product that is composed of:

A

Protein and disaccharide

B

Protein and lipid

C

Lipid and carbohydrate

D

Carbohydrate and vitamins

Q90

Which of the following is the respiratory surface in human beings?

A

Lungs

B

alveoli

C

Windpipe

D

alveolar duct

Q91

The fibrous connective tissue which attaches bone to bone is called:

A

Tendon

B

Ligament

C

reticular tissue

D

Cartilage



Q92

Which of the following condition is hybrid?

A

AA

B

Aa

C

aa

D

all of these

Q93

The viral DNA or RNA is protected by

A

shell of lipids

B

shell of proteins

C

shell of carbohydrates

D

shell of amino acids

Q94

Assume that blood type is not a sex-linked trait. A mother with genotype "A/O" and a father with genotype "A/B" could NOT have a child with which blood type?

A

A

B

B

C

AB

D

O

Q95

Which of the following statements correctly describes how the host cell membrane is changed by viral replication?

A

Pores develop.

B

glycocalyx layer is formed.

C

membrane is resynthesized

D

Viral proteins are acquired.

Q96

Uterus opens into the vagina through:

A

uterus

B

cervix

C

oviduct (fallopian tube)

D

ovary

Q97

What are the end products of the ETC in animals?

A

ATP

B

carbon dioxide

C

water

D

both a and c

Q98

Which of the following is FALSE about concerning enzymes?

A Substrates must bind the enzyme's active site in order to initiate its effects

B Enzymes increase both the forward rate and reverse rate of a reaction

C Enzymes are not destroyed in a reaction and can be used in the same reaction countless times

D Enzymes increase the amount of product created in a reaction

Q99

What is the approximate diameter of the peroxisome?

A

0.5 micrometer

B

1.5 micrometer

C

2 micrometer

D

1 micrometer



Q101

Which of the following is non-cellular in most cases in animals?

A

Sclerenchyma

B

Chlorenchyma

C

Mesoderm

D

Mesenchyme

Q103

Chitinous Setae are the locomotory organs of annelids which are present on?

A

cell wall

B

prostomium

C

nucleolus

D

parapodia

Q104

Which of the following is NOT an example of evidence supporting the endosymbiotic theory?

A

Mitochondria and other plastids multiply by binary fission.

B

Mitochondria contain their own DNA, which is a single circular chromosome.

C

Mitochondria have their own ribosomes, which are 70s.

D

none of these

Q105

A horse is pulling a cart of mass 50 kg in the horizontal direction, if the distance travelled is 20 m then what will be the work done by the horse

A

1000 J

B

-1000 J

C

12/31

D

500 J

Q106

A current of 5A flows in a resistor of 2 ohms. Calculate the energy dissipated in 300 seconds in the resistor.

A

5KJ

B

10KJ

C

15KJ

D

20 KJ

Q107

Magnetic Field lines move from \_\_\_\_\_

A

north to south

B

south to north

C

east to west

D

west to east

Q108

The sum of all forms of molecular energies (kinetic and potential) of a substance is termed as its:

A

absolute temperature

B

internal energy

C

potential energy

D

kinetic energy

Q109

The maximum value of displacement from the mean position is called:

A

height

B

amplitude

C

frequency

D

distance



Q110

SI Unit of current is ?

A

Ampere

B

Volt

C

Joules

D

Watt

Q111

SI unit of acceleration is:...

A

m

B

$\text{m}^2$

C

$\text{m/s}$

D

$\text{m/s}^2$

Q112

White rays can produce x-rays?

A

TRUE

B

FALSE

C

May depend on some conditions

D

none of these

Q113

What will be the product after alpha decay of U-238?

A

Th-234

B

Po-234

C

Rn-234

D

none of these

Q114

A body is travelling in a circle of radius  $r$  at a constant angular velocity  $\omega$ . Its centripetal acceleration will be:

A

$$a = r\omega$$

B

$$a = r/\omega$$

C

$$a = \omega r^2$$

D

$$a = r\omega^2$$

Q115

The speed  $v$  of the waves in the string depends upon the tension  $F$  of the string and  $m$ , the mass per unit length of the string. It is given by

A

$$v^2 = F/m$$

B

$$v = F/m$$

C

$$v \cdot m = F$$

D

$$v = F \cdot m$$

Q116

Transformer operates on

A

A.C

B

D.C

C

both

D

none of these

Q117

The value of coulomb constant is:...

A

$9 \times 10^9 \text{ Nm}^2$

B

$9 \times 10^9 \text{ Nm}^2 / \text{C}^2$

C

$9 \times 10^{-9} \text{ Nm}^2 / \text{C}^2$

D

$9 \times 10^{-9} \text{ Nm}^2$



Q118

Alternating Current Generators use

A

coiled rings

B

split rings

C

slip rings

D

solenoid rings

WWW.SAEEDMDCAT.COM

Q119

Which of the following process is reversible ?

A

Transfer of heat by radiation

B

Electrical heating by nichrome wire

C

Transfer of heat by conduction

D

Isothermal compression

Q120

A constant force  $F = 2i + 3j + 4k$  is applied on a body what will be the work done to move a body 5 m in z- direction

A

0

B

10 J

C

45 J

D

20 J

Q121

x-rays can be deflect by

A

electric field

B

magnetic field

C

both a & B

D

none of these

Q122

An object moving in a circle is tied to a string. What happens when the string is cut?

A

it continues moving in a circle

B

it flies off along a tangent

C

it falls straight down

D

none of these

Q123

Average dc Voltage across the load in terms of  $V_{max}$  is

A

$0.532 V_{max}$

B

$0.637 V_{max}$

C

$0.759 V_{max}$

D

$0.437 V_{max}$

Q124

The value of triple point of water is:....

A

1 K

B

100 K

C

273.16 K

D

0 K

Q125

Revolution/minute is the unit for

A

Angular displacement

B

Angular momentum

C

Angular acceleration

D

Torque



Q125

Revolution/minute is the unit for

A

Angular displacement

B

Angular momentum

C

Angular acceleration

D

Torque

Q126

When one electron strike with one proton both will

A

attract

B

repel

C

no effect

D

annihilate

Q127

According to Faraday's Law, emf induced in circuit depends on

A

max. magnetic flux

B

rate of change of magnetic flux

C

change in magnetic flux

D

initial flux

Q128

The force between two charges  $Q$  and  $q$ , separated by a distance  $d$  is  $F$ . What will be the force between  $4Q$  and  $q/2$ ?

A

$2F$

B

$4F$

C

$F$

D

$F/2$

Q129

You have three capacitors, each of  $2\ \mu\text{C}$ . In which of the following combinations of the three capacitors, the resultant capacitance is  $3\ \mu\text{C}$ ?

A

all three capacitors in series

B

two capacitors are in series, one in parallel

C

two capacitors are in parallel, one in series

D

all three capacitors in parallel

Q130

Lifetime of an excited state is

A

$10^{-6}$ s

B

$10^{-7}$ s

C

$10^{-8}$ s

D

$10^{-3}$ s

Q131

Coulomb's law is true for

A

Atomic distance

B

Nuclear distance

C

Charge as well as uncharged particle

D

All the distances

Q132

A body of mass 2 kg is raised vertically raised by 2m then work will be

A

38.2 J

B

392.1 J

C

39.2 J

D

40 J



Q133

The maximum efficiency of full wave rectifier is

A

80.60%

B

40.60%

C

70%

D

50%

Q134

What is the atomic number and mass number of Helium?

A

$A=4, Z=2$

B

$A=2, Z=4$

C

$A=1, Z=1$

D

$A=3, Z=1$

Q135

Half wave rectifier passes only

A

lower half cycle

B

upper half cycle

C

both cycles

D

none of them

Q136

A field in which work done in moving a body along the close path is zero called

A

Electric field

B

conservative field

C

magnetic field

D

none of these

Q137

The circuit which gives continuously varying potential is called

A

Complex network

B

Wheatstone bridge

C

Potential divider

D

All of above

Q138

Which rays are used to scan bones

A

white rays

B

beta rays

C

gamma rays

D

none of these

Q139

The coupling coefficient of perfectly coupled coil is

A

zero

B

1

C

more than 1

D

infinite

Q140

The overvoltage surges in power systems me be caused by

A

Lightning

B

Resonance

C

Switching

D

All of the above



Q141

Nuclear force is :

A

spin independent

B

both charge and spin independent

C

spin dependent but charge independent

D

charge dependent

Q142

When a light ray travels from the medium of low refractive index to a medium of high refractive index. Its....

A speed decreases, frequency decreases, wavelength unchanged

B speed decreases, frequency unchanged, wavelength unchanged

C speed unchanged, frequency increases, wavelength decreases

D speed decreases, frequency unchanged, wavelength decreases

Q143

When white light is used in Double Slit experiment then

A

non interference fringes observed

B

only central bright fringe is observed

C

only red and white fringes are observed

D

central bright and few coloured fringes are observed

Q144

We can calculate velocity of an object from displacement-time graph by:...

A

calculating area under the graph

B

finding gradient of displacement-time graph

C

calculating area above the graph

D

finding the length of the graph

Q146

Instantaneous velocity is defined at

A

particular displacement

B

instant acceleration

C

instant time

D

average time

Q147

Adiabatic process can be defined as:...

A

$$PV^\gamma = \text{constant}$$

B

$$PV^\gamma = RT$$

C

$$P / V^\gamma = \text{constant}$$

D

$$PV^\gamma = nRT$$

Q148

Displacement of an object in moving around a complete circle is

A

$2\pi r$

B

$2r$

C

$\pi r$

D

zero

Q149

A particle having the charge of 20 electrons on its falls through a potential difference of 100 volts. Calculate the energy acquired by it in electron volt (eV).

A  $2.0 \times 10^{-2} \text{ eV}$

B  $2.0 \times 10^{-3} \text{ eV}$

C  $2.0 \times 10^2 \text{ eV}$

D  $2.0 \times 10^3 \text{ eV}$



Q150

In a periodic wave, the distance between second and fifth crests is 15 cm, what is the wavelength of the wave?

A

45 cm

B

5 cm

C

$\frac{1}{5}$  cm

D

$\frac{1}{3}$  cm

Q151

In which case, the object is speeding up:....

A

velocity is positive acceleration is negative

B

velocity is negative acceleration is negative

C

velocity is negative acceleration is zero

D

velocity is negative acceleration is positive

Q152

A resistance of 40 Ohms is attached to a circuit having current of 300 Amp, Find its voltage.

A

12000 volts

B

15000 volts

C

20000 volts

D

300 volts

Q153

Power transformers are designed to have maximum efficiency at

A

Full load

B

50%

C

80%

D

No load

Q154

If a charged particle is at rest but we are seeing it from a train then we observe

A

electric field

B

magnetic field

C

both fields

D

none of these

Q155

A variable force  $F = 2x$  is applied what will be the work done in moving the particle from  $X = 10$  to  $0$

A 100 J

B 50 J

C -50 J

D -100 J

Q156

The energy input to an engine is 60 J, and the work it performs is 15 J. What is its thermal efficiency?

A

4.00

B

1.00

C

0.25

D

impossible to determine

Q157

The deuterium atom has \_\_\_\_\_ quarks

A

3

B

6

C

9

D

12



Q158

100 W heater is used to melt 50 g of ice at 0°C. How long should the heater be switched on? Specific latent heat of fusion of ice is 334 J/g.

A 28 min

B 16.7 min

C 2.8 min

D 167 min

Q159

The bound state electron have

A

wave nature

B

particle nature

C

dual nature

D

it never moves when in bound state

Q160

To get a peak load voltage of 40V out of a bridge rectifier, what should be the approximate rms value of secondary voltage?

A

0V

B

14.4V

C

28.3V

D

56.6 V

Q161

Choose the correct sentence.

A

Who isn't here yet asked Parveen.

B

"Who isn't here yet?" asked Parveen.

C

Who isnt here yet? asked Parveen.

D

"Who isnt here yet?" asked Parveen.

Q162

I bought \_\_\_\_\_ new TV set yesterday.

A

a

B

an

C

the

D

no article

Q163

He \_\_\_\_\_ out five minutes ago.

A

goes

B

has gone

C

had gone

D

went

Q164 You must had (A)/ a kind and gentle heart (B) if you want (C) / to become a successful doctor (D)

A You must had

B a kind and gentle heart

C if you want

D to become a successful doctor.

Q165

Please open the door.

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory



Q166

No news \_\_\_\_\_ good news.

A

is

B

are

C

was

D

were

Q167

Choose the correct sentence.

A You're going to lose your slice of cake if you do not eat it quickly!

B Your'e going to lose your slice of cake if you do not eat it quickly.

C You're going to lose your slice of cake if you do not eat it quickly.

D Youre going to lose your slice of cake if you do not eat it quickly.

Q168

Would you mind \_\_\_\_\_ (open) the window please, it's hot here.

A

open

B

opens

C

opened

D

opening

Q169

Choose the correct sentence.

A After we'd closed the door we sat down to read the newspaper.

B After we'd closed the door, we sat down to read the newspaper.

C After w'ed closed the door, we sat down to read the newspaper.

D After we'd closed the door, we sat down to read the Newspaper.

Q170 Everyone hopes to get a job with prospects ---- promotion, but not many people manage to do so.

A on

B of

C in

D around

Q171

I can see that you \_\_\_\_\_ a lot of fun.

A

having

B

have

C

are having

D

is having

WWW.SAEEDMDCAT.COM

Q172

Bring me that file.

A

Declarative

B

Imperative

C

Interrogative

D

Exclamatory

Q173

I would love (A)/ to be able to swim (B)/ if I am not afraid (C)/ of water (D)

A

I would love

B

to be able to swim

C

if I am not afraid

D

of water.



Q174

Saad likes to play \_\_\_\_\_ hockey.

A

a

B

an

C

the

D

no article

Q175

According to a survey (A)/ only those forests which were (B)/ not under village management (C)/ succumbed from fires recently.(D)

A

According to a survey

B

only those forests which were

C

not under village management

D

succumbed from fires recently.

Q176

Saira speaks so fast that it's \_\_\_\_\_ to understand her sometimes.

A

easy

B

difficult

C

slow

D

wrong

Q177

Choose the correct spelling of the word

A

comitte

B

commite

C

committee

D

comittee

Q178

laud

A

criticise

B

lament

C

praise

D

oppose

WWW.SAEEDMDCAT.COM

Q179

Find the error?

A

No, it's not true.

B

The curtain closed, and the people will applaud.

C

My sister is a medical practitioner.

D

No mistakes.

Q180

We \_\_\_\_\_ (visit) the lake many times before, but we enjoyed ourselves the most this time.

A

visit

B

have visited

C

visited

D

had visited

Q181

Statement There has been an unprecedented increase in the number of successful candidates in this year's School Leaving Certificate Examination. I. The government should make arrangements to increase number of seats of intermediate courses in existing colleges. II. The government should take active steps to open new colleges to accommodate all these successful candidates.

A

both of them follows

B

None of them follows

C

Only I follows

D

Only II follows



Q182

Statement: The government has imported large quantities of sugar as per trade agreement with other countries. The prices of sugar in the domestic market have fallen sharply in the recent months.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause

Q183

Statements No rings are bangles. All gold rings. Conclusions (I) No bangles are gold. (II) Some rings are gold.

A

Only conclusion (I) follows

B

Only conclusion (II) follows

C

Both conclusions follow

D

Both of them do not follow

Q184

Complete the series AB, EF, \_\_\_\_\_, MN

A

IJ

B

RS

C

WX

D

MN

Q185

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A

Both of them follows

B

None of them follows

C

Only I follows

D

Only II follows

Q186

A book cannot exist without

A

Education

B

Pictures

C

Pages

D

Qualification

WWW.SAEEDMDCAT.COM

Q187

Look at this series: 36, 34, 30, 28, 24, ... What number should come next?

A

20

B

22

C

23

D

26

Q188

Which of the following sets are null sets ?

A

$\{\}$

B

$\emptyset$

C

Both (a) and (b)

D

Both A and B

Q189

I. The biker protested against the increase in fuel prices. II. The dialogue between the government representatives and the leaders of the biker's association were not successful.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect.

C

Both statements I and II are independent causes

D

None of these



Q190

Statements The government has decided to roll back the hike in the prices of cooking gas and kerosene. Some ministers had resigned in protest against the hike in prices of cooking gas and other petroleum products.

A

I is cause and II is effect

B

II is cause and I is effect

C

Both are independent causes

D

both are effects of independent causes

Q191

Aldol condensation takes place in the presence of \_\_\_\_?

A

$\text{H}_2\text{SO}_4$

B

$\text{K}_2\text{Cr}_2\text{O}_7$

C

$\text{NaOH}$

D

$\text{H}_2\text{O}/\text{H}^+$

Q192

Which of the following is correct general formula of aliphatic carboxylic acid ?

A

$\text{RCOOH}$

B

$\text{ArCOOH}$

C

$\text{PhCOOH}$

D

None of these

Q193

Which of the following does not show metamerism?

A

Ethers

B

Secondary amines

C

Ketones

D

Aldehydes

Q194

Geometry of the complex compounds usually depends upon

A

type of ligands

B

types of hybridization in the elements of ligands

C

hybridization of central metal

D

All of above

Q195

Oxidation Number of all the elements in free state is

A

unity

B

Positive

C

Zero

D

Negative

Q196

Gypsum is applied to the soil as a source of

A

Ca and P

B

S and P

C

Ca and S

D

We could not apply

Q197

Evaporation of water from aerial parts of plants is called:

A

ascent of sap

B

deplasmolysis

C

deplasmolysis

D

none of these



Q198

Influenza caused by which virus?

A

adenovirus

B

Pox virus

C

influenza Virus

D

herpes virus

Q200

What type of prokaryotic genetic recombination requires the presence of plasmids?

A

transduction

B

transformation

C

binary fission

D

conjugation

Q201

Typically, spiders' blood is blue due to the presence of which of the following?

A

haemoglobin

B

hemerythrin

C

Haemocyanin

D

both b and c

Q202

The spinal cord is continuous with which part of the brain?

A

cerebrum

B

cerebellum

C

medulla oblongata

D

pons

Q203

Which type of the receptors are present in the ear?

A

Chemoreceptors

B

Photoreceptors

C

Thermoreceptors

D

Mechanoreceptors

Q204

The auditory relay center is found in:

A

Corpus callosum

B

Hindbrain

C

Forebrain

D

Midbrain

Q205

According to the induced fit model, what happens when an enzyme-substrate complex is formed?

A

The contact between the substrate and the enzyme causes a change in the shape of the active site.

B

The shape of the substrate and the shape of the active site are complementary to each other.

C

The substrate fits into the active site and forms bonds with the amino acids at the active site.

D

All of the above.

Q206

Louis Pasteur discovered a vaccine against which disease?

A

anthrax

B

smallpox

C

rabies

D

HIV



Q207

For every 3 molecules of carbon dioxide in Calvin cycle how much G3P is produced?

A

6

B

2

C

4

D

8

Q208

Which of the following bone forms hip joint with hip bone?

A

tibia

B

fibula

C

tarsals

D

femur

Q209

The carbon dioxide transported in the form of carbonate ions is:

A

30%

B

50%

C

70%

D

95%

Q209

The carbon dioxide transported in the form of carbonate ions is:

A

30%

B

50%

C

70%

D

95%

Q209

The carbon dioxide transported in the form of carbonate ions is:

A

30%

B

50%

C

70%

D

95%

Q209

The carbon dioxide transported in the form of carbonate ions is:

A

30%

B

50%

C

70%

D

95%